

REPORT

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SOURCE Documentary as indicated. (Information specifically requested.)

"Action of Physostigmine on the Fatigued Skeletal Muscle." N. A. Yudenich, Med Inst, Smolensk

"Byull Eksp. Biol i Med" Vol 21, No 4, 1946, pp 41-3

Experiments carried out on a muscle-nerve preparation of the frog. When skeletal muscle becomes fatigued through rhythmical stimulation of the nerve, there is an increased liberation of a acetylcholine by the nerve endings, as a result of which fatigue develops. Physostigmine, which protects the acetylcholine by interfering with cholinesterase activity, reduces muscular fatigue. In the course of experiments, fatigue is increased several times by stimulation and decreased again each time by physostigmine. However, effectiveness of physostigmine gradually decreases.

"Effect of Cyanide and Arsenic Salts on Nerve-Muscle Preparation," E. P. Kosareva, Med Inst, Smolensk

"Byull Ekspert Biol i Med" Vol 11, 1941, pp 361-4

In frog sciatic-gastrocnemius preparations perfused with Ringer solution, followed by 0.01 M $K_2S_2O_8$, sensitivity to interrupted current remained unchanged for as long as 1.5 hours, after which it rapidly decreased and disappeared after about 2 hours. With 1-2% $K_2As_2O_8$, sensitivity was retained for as long as 4-5 hours or

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longer. Effect evidently due to alteration of nerve endings, KCN suppressing oxidative processes and Na_2AsO_4 , due to increase of oxidative processes, interfering with this effect of KCN.

"Transmissible Experimental Sarcoma of Rats Produced by Injection of 3,4,8,9-dibenzopyrene," R. Ya. Tret'yakova, Med Inst, Smolensk

"Byull Eksper Biol i Med" Vol 11, 1941, pp 496-500

Subject drug in 1% olive oil solution was injected into sex glands of male rats; after 5 days another injection was made. Sixteen of the 18 animals died in 3 months; one of the remaining developed sarcoma and was killed after 13 months. Sarcoma characterized by variety of cellular forms. It was transplanted successively and carried through 11 generations. All resulting sarcomas had same polymorphic character as original growth. High percentage of the animals died after the necessary operations, average life span being 4-10 weeks.

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